

**PATENT APPLICATION**

**RESPONSE UNDER 37 CFR §1.116  
EXPEDITED PROCEDURE  
TECHNOLOGY CENTER ART UNIT 2861**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Ryuichi KOJIMA et al.

Group Art Unit: 2861

Application No.: 10/715,499

Examiner: L. NGUYEN

Filed: November 19, 2003

Docket No.: 117804

For: DROPLET EJECTING HEAD AND DROPLET EJECTING APPARATUS

**REQUEST FOR RECONSIDERATION AFTER FINAL REJECTION**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

In reply to the April 25, 2006 Office Action, reconsideration of the rejections is respectfully requested in light of the following remarks.

Claims 1-15 and 17-20 are pending in this application.

**I. Allowable Subject Matter**

Applicants thank the Examiner for the indication that claims 6 and 12 contain allowable subject matter.

**II. Rejections Under 35 U.S.C. §102(a) and §103(a)**

Claims 1, 2, 4 and 19 are rejected under 35 U.S.C. §102(a) over U.S. Patent No. 6,923,521 (Bates); (2) claim 3 is rejected under 35 U.S.C. §103(a) over Bates in view of U.S. Patent No. 6,742,866 (Anderson); (3) claims 5, 7 and 9 are rejected under 35 U.S.C. §103(a) over Bates in view of U.S. Patent No. 6,595,614 (Morikawa); and (4) claims 10, 11,

13, 15, 17, 18 and 20 are rejected under 35 U.S.C. §103(a) over Morikawa in view of Bates and Anderson. These rejections are respectfully traversed.

Each of claims 1, 2 and 10 recite that the sizes of dot diameters are changed at random.

The Office Action cites Fig. 11 of Bates and asserts that Bates discloses, large drops represented by large circles that are disposed in a random fashion. Applicants respectfully disagree.

Contrary to the assertions made in the Office Action, Bates fails to disclose that the large circles are disposed in a random fashion. In fact, the figures and specification of Bates require specific dimensions between each of the dots and require a particular arrangement of the dots.

With reference to Fig. 11 of Bates, Bates discloses:

The numbers inside the circles in FIG. 11 refer back to FIG. 6. A single number inside two concentric circles indicates that the number applies to both circles. When there are two numbers, the number inside the small circle identifies the small circle and the number outside the small circle identifies the large circle. The vertical pattern of pixel locations is reflective of the fixed relationship between small and large nozzles in the printhead which forces a small drop to be located 1/600 inch vertically from a large drop and vice versa. Thus, in order to minimize the number of passes required to place all of the drops, each small drop pixel location is separated from at least one large drop pixel location by {fraction (1/600)} inch in the vertical direction, and each large drop pixel location is separated from at least one small drop pixel location by {fraction (1/600)} inch in the vertical direction. Moreover, each pixel location that can receive a small drop and/or a large drop is separated from at least one other pixel location that can receive a small drop and/or a large drop by {fraction (1/600)} inch in the vertical direction. All three of these types of pixel locations are intermixed with each other in the matrix. Also, the three types of pixel locations are alternately aligned in each horizontal row of the matrix. That is, each pixel location is separated from another pixel location of its own type by three pixel locations in the horizontal direction. Printhead 26 is used to jet ink onto the matrix of pixel locations (Step S304). The particular arrangement of pixel locations shown in FIG. 11 is simple to implement and spreads the pixel locations horizontally as evenly as possible. (emphasis added).

See col. 9, line 42 to col. 10, line 3 of Bates.

Based on this disclosure of Bates, the vertical pattern of small circles and large circles is reflective of the fixed relationship between the small and large nozzles in the printhead. This is clearly not a disclosure of sizes of dot diameters (i.e., small and large circles) that are changed at random, as recited in claims 1, 2 and 10. Bates further discloses that some pixel locations can receive both a large dot and a small dot, some pixel locations can receive only a large dot, and other pixel locations can receive only a small dot. See col. 9, lines 33-41 of Bates. Here, Bates is disclosing only two sized dots, a large dot and a small dot, and not that the sizes of the dot diameters are changed at random.

Anderson and Morikawa fail to cure the deficiency discussed above with respect to Bates.

For the foregoing reasons, claims 1, 2 and 10, as well as claims depending therefrom, are not anticipated by Bates, Anderson and Morikawa, in any combination. Withdrawal of the rejections is respectfully requested.

### **III. Conclusion**

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the pending claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



James A. Oliff  
Registration No. 27,075

Jesse O. Collier  
Registration No. 53,839

JAO:JOC/ldg

Date: July 13, 2006

**OLIFF & BERRIDGE, PLC**  
**P.O. Box 19928**  
**Alexandria, Virginia 22320**  
**Telephone: (703) 836-6400**

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